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57

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|--|-------------|----------------------|---------------------|------------------|
| 10/671,155   | 09/25/2003  | Siegfried Fleischer  | 42P8634C            | 7042             |
| 8791   | 7590        | 07/14/2004           | EXAMINER            |                  |
| BLAKELY SOKOLOFF TAYLOR & ZAFMAN<br>12400 WILSHIRE BOULEVARD, SEVENTH FLOOR<br>LOS ANGELES, CA 90025 |             |                      | SOHN, SEUNG C       |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2878                |                  |

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/671,155

Applicant(s)

FLEISCHER ET AL.

Examiner

Seung C. Sohn

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, **the optical input port, the light sensing device optically coupled to the optical input port, the integrated circuit (IC), the optic function subcircuit optically coupled to the optical input port, the communications circuitry of the IC, the switch integrated on the IC, the power supply of the optic function subcircuit, the computer system, the circuit card, the optical interface on the circuit card, the microprocessor on the circuit card, the optical input/output port, the enable port of the subcircuit, IC substrate, the optical modulator integrated on the IC substrate, the switch integrated on the IC substrate, and the optical modulator coupled to the optical receiver** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement

Art Unit: 2878

sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because **block diagrams (54, 62) need labeling**. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Double Patenting***

3. ***Claims 20-26 are rejected under the judicially created doctrine of obviousness-type double patenting*** as being unpatentable over claims 1-7 of U.S. Patent No. 6,649,898. Although the conflicting claims are not identical, they are not patentably distinct from each other because the photodetector can be coupled to the light sensing device, instead of independent of it, since anyhow the photodetector provides a sensing signal to the light sensing device.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. ***Claims 1-9 and 27-29 are rejected under 35 U.S.C. 112, second paragraph,*** as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **Regarding claim 1**, it is unclear and confusing as to how the light sensing device is *optically coupled* to the optical input port and sensing light at the optical input port. Which one is actually sensing light, the light sensing device or the optical input port? When two elements are optically coupled, there should be an optical signal transmission between those two elements, one transmitting and the other receiving. Which one actually transmits optical signals? The same reasoning applies to between the optic function subcircuit and the optical input port. Clarification is required. **Regarding claim 27**, line 3, "the IC substrate", line 4, "the photodetector output signal", and "line 7, "the light sensing subcircuit" lack antecedent basis.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. ***Claims 1-5, 7-10, 12-19 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Chirovsky et al. (Patent No US 5,581,077).***

**Regarding claims 1-4, 10, 14-15 and 27**, Chirovsky et al. shows in Fig. 4 the following elements of Applicant's claim:

- a) an optical input port (input part of IC, 400);
- b) a light sensing device (410, i.e., optical detector) optically coupled to the optical input port to produce a signal in response to sensing light at the optical input port (Col. 6, lines 21-25);
- c) an optic function subcircuit (435, i.e., optical modulator) integrated on the IC and optically coupled to the optical input port to provide an interface between the optical input port and communications circuitry of the IC (Col. 6, lines 5-56); and
- d) a switch (425, i.e., processor) integrated on the IC and connected to the light sensing device (410) and to the optic function subcircuit (435) to activate the optic function subcircuit when light is sensed (Col. 6, lines 50-52).

**Regarding claims 5 and 16,** Chirovsky et al. shows in Fig. 4 that a light sensing circuit (415, i.e., conditioning circuit) between the light sensing device (410) and the switch (425) for amplifying and conditioning the light sensing signal (Col. 7, lines 1-10).

**Regarding claim 7,** Chirovsky et al. discloses that the switch (425) comprises a logic gate coupled to the light sensing device (410) and to an input to the optic function subcircuit (435) to alternately enable and disable the input to the optic function subcircuit (Col. 6, lines 36-39).

**Regarding claims 8, 13 and 29,** Chirovsky et al. discloses that the input to the optic function subcircuit (435) is a power supply (line drive) of the optic function subcircuit.

**Regarding claims 9, 12, 17-19 and 28**, Chirovsky et al. discloses that the input to the optic function subcircuit (435) is a clock input to the optic function subcircuit.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**10. *Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirovsky et al. (Patent No US 5,581,077) in view of Embree et al. (Patent No US 5,903,190).***

Chirovsky et al. shows the claimed invention as above, but is silent that the light sensing circuit comprises a current mirror in which one side of the mirror includes the photodetector and the other side of the mirror comprises a slow transistor, the gate of

which is connected to the output of the photodetector. Embree et al. shows in Fig. 1 a current mirror (22) with a slow transistor (Q10). It would have been obvious to one of ordinary skill in the art to provide the current mirror and the slow transistor of Embree et al. in the device of Chirovsky et al. for the purpose of compensating slower frequency response (Col. 2, line 65 – Col. 3, line 6).

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung C. Sohn whose telephone number is (571) 272-

Art Unit: 2878

2446. The examiner can normally be reached on Monday through Friday from 8:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**THANH X. LUU**  
**PATENT EXAMINER**